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U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV, ATHENS, GEORGIA

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MEMORANDUM

DATE: OCT 27 1988

SUBJECT: Comments on Draft Project Operations Plan for the Medley Farm Site, Gaffney, Cherokee County, South Carolina, ESD Project No. 893-035

FROM: Donald Hunter, Hydrogeologist
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ATLANTA, GA.

The subject Project Operations Plan (POP) has been reviewed as requested and was found to be unacceptable. Based on this review, the following comments are offered. Comments 4, 5, 6, 7, 8, 11, 12, 14, and 19 address critical deficiencies which must be adequately addressed before ESD will consider the POP an acceptable document. The other comments request clarification or offer suggestion for improving the document. These comments are referenced to the page number and section number of the material eliciting the comment.

1. p. 30/Sec. 5.1.3, RI Analytical Requirements - This section of the POP indicates that the indicator parameters will represent the major analytical fractions identified in the Phase IA investigation. As is also indicated in this section of the POP, EPA guidance indicates that the indicator parameters should "represent the most toxic, mobile and persistent chemicals at the site, as well as those present in the largest amounts. We suggest that this guidance be carefully taken and that the "shopping list" of potential indicator compounds also include compounds indicated in the analyses of drum contents reported during the emergency removal action initiated in June 1983, assuming that there were more compounds detected and reported than the five compounds listed on page 9 of the POP.

2. p. 32/Table 5.2, Note No. 3 - What will be the criteria, after reviewing the results of all other test pit analyses, for selecting samples for compositing for dioxin analyses? It is imperative that the archived samples be kept at 4 degrees Centigrade while awaiting the results and subsequent shipment.

3. p. 34/Sec. 5.1.4, Site Security - The plan needs to indicate what is meant by "temporary measures" to be used to prevent access when

incomplete wells are left unattended. We recommend using a security guard service to maintain a 24-hour watch at the site whenever site investigation personnel are not present, such as, after hours and on weekends.

4. p. 34/Sec. 5.1.5, Potable Water Supply - We do not recommend relying on available sampling records to indicate the quality of the potable water supply to be used for equipment decontamination, grout preparation, and rock coring. The field sampling and analysis plan should include an appropriate number of blanks of this water, depending on the length of the study, to provide an adequate amount of quality control data.

5. p. 35/Sec. 5.1.7.2, Equipment Cleaning and Handling Procedures - If backhoes are simply steam-cleaned between test pits, special precautions must be taken to minimize the chances of sample interference between pits. Either collect the sample as indicated on page 48 of the POP or collect a chunk sample from the wall of the pit after dressing the surface with a clean stainless steel spoon or spatula.

6. p. 35/Sec. 5.1.7.2, Equipment Cleaning and Handling Procedures - Steam cleaning alone is not acceptable for well casing, screen, centralizers, tremie pipe, measuring lines, and down hole tools and equipment. This equipment should be cleaned according to the procedures, specified at Section 5.1.7, as modified by these comments.

7. p. 36/Sec. 5.1.7.2, Equipment Cleaning and Handling Procedures - The itemized procedures on page 36 are not acceptable. The following changes need to be made:

   - Delete "or distilled water" from step No. 3.
   - Delete "deionized or distilled" from step No. 5, and replace with "organic-free".
   - Sheet plastic is acceptable for wrapping large equipment after cleaning.
   - Add note: The solvent rinse step should be left out for plastic items, such as PVC well screen and casing.
   - Add note: If no organic-free water is available, equipment should be allowed to air dry as long as possible.

8. p. 36/Sec. 5.1.7.2, Equipment Cleaning and Handling Procedures - Under no circumstances will steam cleaning be considered as an alternate decontamination procedure to steps 2 through 5, without qualification. It is not an acceptable procedure, as indicated earlier, for cleaning casing, screen, downhole tools and equipment, etc. The POP should either explain the circumstances under which steam cleaning would be considered an alternative or delete the sentence.

9. p. 47/Sec. 5.5.4, Equipment and Procedures - What are the criteria for selecting the location of the discrete grab sample to be collected from each test pit and analyzed for volatile organic constituents? We also assume that the discrete sample will be in addition to a sample for volatile organic analyses collected as a part of the composite sample from each pit. Please indicate, in the response, if this is a correct assumption.

10. p. 56/Sec. 5.6.4, Equipment and Procedures - We suggest collecting a blank of any vegetable oil that may be used as a lubricant in drilling.

11. p. 56/Sec. 5.6.4, Equipment and Procedures - Reiterating an earlier comment, the reference to steam cleaning well materials, found near the bottom of the page needs to be changed. This is not acceptable.

12. p. 59/Sec. 5.6.4, Equipment and Procedures - The 30 minute hydration time for the bentonite pellet seal is not adequate. Most manufacturers recommend a minimum hydration time of 8 hours before grouting.

13. p. 60/Sec. 5.6.5, Well Development - We suggest including several additional observations, to be used along with the parameters listed in this section, for determining when adequate development has been achieved. Field records should indicate at least a subjective evaluation of the turbidity of the water removed from the well during development. Ideally, a turbidimeter would be used to provide a precise indication of the degree of clarity being achieved as development proceeds. Additionally, it is sometimes useful to keep a record of the amount of water introduced into the borehole during drilling and establishing that as a minimum amount of water to be removed during development to help ensure that all drilling fluids have been removed.

14. p. 63/Sec. 5.7.2, Sampling Locations and Frequency - No matter what the rationale for selecting the background soil boring location, it is not good practice to conduct the boring and sampling at the selected background location after conducting the borings at the "hot" locations. We strongly recommend that the background location be sampled first.

15. p. 91/Sec. 6.1, Field Logbook Entry Procedures - We recommend additional information be included on the list of minimum entries to be made in the field logbook. In addition to the sample identification number, it is good practice to also list tag or label numbers assigned to samples, as well as noting the serial number of the chain-of-custody form, if the forms are numbered, in the field book.

16. p. 96/Sec. 6.4, Sample Chain of Custody - Whenever samples are shipped by a second party, such as the 24-hour delivery service referred to in the POP, the airbill number should be included on the chain of custody form enclosed in the cooler.

17. p. 101/Sec. 6.5, Sample Packaging and Shipping - ESD recommends lining all coolers used to ship samples of liquids with a large plastic garbage bag prior to packing samples. Even though the precautions listed are good practice, the sealed garbage bag provides extra assurance that the cooler will not leak in transit to the laboratory.

APPENDIX A, SITE HEALTH AND SAFETY PLAN (SEPTEMBER, 1988)

18. P. 28/Sec. 5.0, Qualitative Risk Analysis - This section, as well as many other portions of the safety plan, includes a reference to the use of half-face respirators for both dust and organic vapor protection during various activities at the site. ESD has two comments with regard to the use of respirators.

We do not recommend using half-face respirators under any circumstances and recommend instead, because of their higher margin of safety, full-face respirators.

- o Has the originator of the safety plan fully evaluated the compounds anticipated to be encountered during soil sampling, drilling, and ground-water sampling and the effectiveness of the chosen respirator cartridges, particularly with regard to the anticipated concentrations of these compounds? It is important that these considerations be addressed given the 10 - 50 ppm concentration range in which these cartridges will be used. Whenever respirators are included as field safety equipment, OSHA requires that 5-minute escape packs also be available.

19. p. 30/Sec. 7.0, Required Personal Protective Equipment - The safety plan needs to address the PPE requirements of the contractor conducting the soil gas survey. It is not acceptable to omit this information from the summary.

If you have any questions regarding these comments, please call me at FTS 250-3351.

cc: Lair/Mundrick
Knight